

Leading the Way to Energy Independence







- Reducing Our Dependence on Foreign Oil and Gas
- Stabilizing Gasoline and Home Heating Prices
- Creating Jobs
- Reducing Energy Use and Protecting the Environment

Governor Rod R. Blagojevich



Introduction

- Our nation is in the midst of an energy crisis: we are dependent on – even addicted to – foreign oil and imported natural gas, which means higher gasoline prices, higher costs to heat our homes, and no control over our own destiny. That has to change.
- Failure at the federal level to find energy solutions has left consumers vulnerable to the whims of OPEC and to natural disasters like Hurricane Katrina.
- Unless Illinois develops a comprehensive plan to address our energy needs, we will remain reliant on foreign fuels and energy prices will continue to rise.



An Energy Crossroads

- Fortunately, here in Illinois we have a choice.
- No other state has the combination of agricultural and geological resources that Illinois has.



 We can use our abundant corn, soybeans and coal to become America's leading producer of alternative fuels.





 We will create over 10,000 new, permanent jobs and nearly 20,000 construction jobs.





An Energy Opportunity

 Our 10-year plan will allow us to transform more Illinois corn into ethanol, more soybeans into diesel fuel, and more coal into natural gas to power our vehicles and heat our homes – meeting 50% of our motor fuel needs by 2017.



 We will reduce our state's fuel consumption, establishing a goal of cutting fuel use by 10% by 2017, allowing us to save billions annually in fuel costs, and emit less carbon dioxide, a leading cause of global warming.







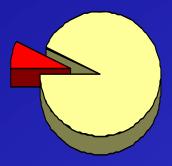
Our Energy Crisis: Dependence on Imported Oil & Natural Gas



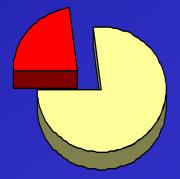
Reliance on Foreign Oil

- Without foreign oil and imported natural gas, Illinois couldn't fuel its cars or heat its homes.
- Illinois only produces:

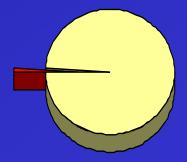
7% of the crude oil we use



23% of the gasoline to fuel our cars



1% of the natural gas to heat our homes





No Alternatives for Consumers

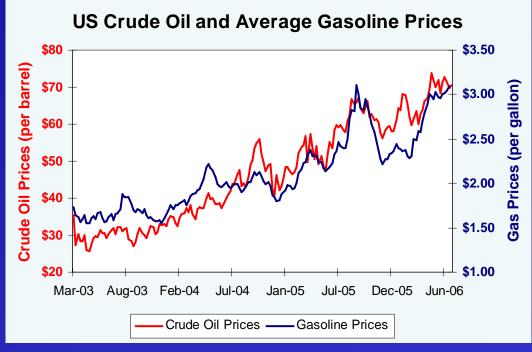
- Today, only 2% of vehicles in Illinois are "flex fuel" vehicles, which can run on either gasoline or ethanol.
- Illinois has about 130 85% ethanol (E-85) pumps – up from just 14 in 2003 – representing just 2% of gas stations in our state.
- The federal government has failed to address our dependence on traditional energy, leaving consumers with few alternatives for powering their cars or heating their homes.





Federal Government Inaction

The U.S. purchases 19%
 of its petroleum from the
 Persian Gulf, including
 Iran and Iraq. If
 international tensions
 continue, so will high
 oil prices.



- Since the decision to invade Iraq, crude oil prices have more than doubled, leading to skyrocketing gasoline and diesel fuel prices.
- Neither the President nor Congress have taken any concrete steps this year to solve the problem. Instead, they have deliberately stalled bills designed to promote alternative sources of energy.



Handouts to the Oil Industry

- Since the invasion of Iraq, oil companies have enjoyed record profits, including a \$36 billion 2005 profit by Exxon Mobil – the largest annual profit ever by a corporation.
- Oil and gas companies still receive billions annually in federal subsidies, including being allowed to pump \$65 billion worth of oil from public lands without paying royalties to the government.
- Last year's federal energy bill provided oil companies with over \$4 billion in new handouts, but did little to reduce our dependence on foreign oil, help consumers, or boost renewable fuel use.



Don't Look for Federal Relief

We can't rely on the federal government to reduce our nation's dependence on oil. Leaders in Washington have refused to improve automobile fuel economy standards or to aggressively invest in homegrown alternative fuels.

Proposed Federal Solutions		Short-Term Impact	Long-Term <u>Impact</u>	<u>Enacted</u>
1.	Rescind tax breaks to oil and gas companies.	Yes	No	
2.	Investigate oil company price manipulation.	Yes	No	
3.	Institute a windfall excise tax on oil companies.	Yes	Yes	
4.	Accelerate research and development of energy options.	No	Yes	
vernor	Rod R. Blagojevich		Energy Inde	pendence 10

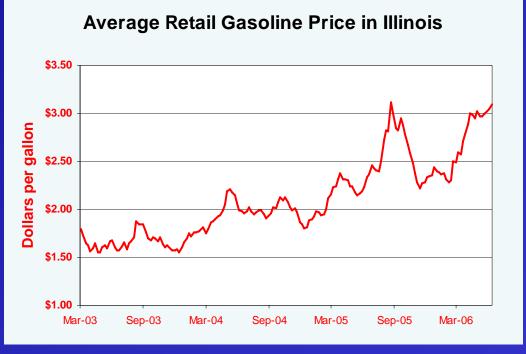


Our Energy Crisis: Rising Prices



Rising Gasoline Prices

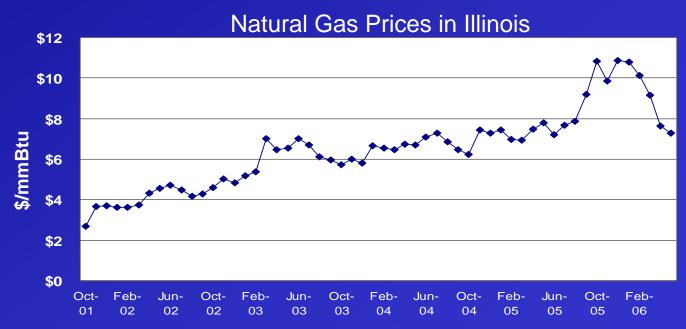
- Since February 2006, the price of a gallon of gasoline in Illinois has risen from \$2.17 to more than \$3.00.
- At \$3.00 per gallon, an Illinois resident spends on average about \$150 per month on gasoline or almost \$500 annually more than last year.





Rising Natural Gas Prices

- If paying \$3 a gallon today isn't bad enough, think about what it costs to heat your home.
- Eight out of ten Illinois residents heat their home with natural gas, and natural gas prices have doubled since 2003, with no end to market volatility in sight.





Falling Natural Gas Supplies

- The U.S. has only 3% of known world natural gas reserves, but accounts for 25% of global consumption.
- Today, about 85% of our supply is produced domestically, but with U.S. natural gas discoveries declining, we will need to find new sources of natural gas.
- Most of the world's natural gas reserves are in countries like Russia and Iran, where political upheaval and instability make these nations an unreliable source of natural gas.



No Relief In Sight

- In 2015, the United States Department of Energy predicts Illinois residents will pay \$4.00 per gallon for gasoline, or an average of \$600 more per year than they do today, if we don't act now.
- If we have to import expensive natural gas, even a 5% annual increase in natural gas bills would cost the typical household \$600 more annually to heat their home in 2015.
- By acting now, we can begin to solve our energy crisis and help protect consumers if energy prices continue to rise.



A New Energy Path For Illinois



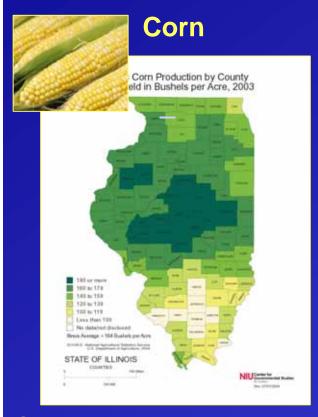
Control Our Energy Destiny

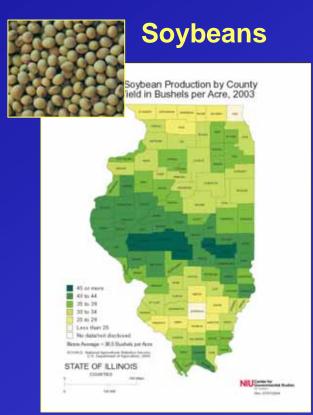
- Illinois and our nation is facing a real energy crisis. With federal inaction in the face of rising prices and increasing dependence on foreign fuel, we need a bold energy plan. If the federal government won't act, we will.
- Illinois has the natural resources to boost fuel supplies, stabilize energy prices and give consumers energy alternatives.
- Illinois can take steps to reduce fuel and energy consumption, which will save consumers money and protect the environment.



Illinois' Abundant Resources

Illinois produces corn, soybeans and coal statewide. These natural resources will help Illinois provide more alternative fuels.









Illinois' Abundant Resources

- Illinois is the nation's #1 soybean producer and, with the Governor's elimination of the state sales tax on biodiesel, Illinois is becoming the largest biodiesel market in the country.
- Illinois is the nation's #2 corn producer and, with advances in biotechnology, we expect to dramatically increase the amount of corn we produce over the next ten years.
- Illinois has 38 billion tons of coal the nation's third largest coal reserve – that can be transformed into clean diesel fuel, home heating gas and electricity.



Our Goals

We can develop Illinois' unique natural resources to:

- 1. Meet 50% of our motor fuel needs we use by 2017, and 25% of the natural gas we use by 2017.
- Give consumers real energy choices that can help them use less energy and save money.
- 3. Create thousands of jobs from new fuel production plants and from increased demand for agricultural crops and coal.
- 4. Clean our air and reduce greenhouse gas emissions that lead to global warming, by cutting consumption of motor fuel.

Our Plan

We propose a five-part plan to expand Illinois' energy options over the next decade:

- Invest in renewable biofuels like ethanol made from corn and biodiesel made from soybeans.
- Increase the number of gas stations that sell biofuels until all gas stations provide E-85, and help the auto industry to make more and better flex fuel vehicles.
- Invest in natural gas, diesel fuel and electricity produced from 3. Illinois coal using advanced coal gasification technology.
- Use captured carbon dioxide to boost extraction of resources from of Illinois's oil and natural gas reserves, while reducing the environmental impact of coal gasification facilities.
- Invest in renewable power and energy efficiency, while reducing emissions and fuel consumption.



Energy Alternatives

Each element of our plan will play a key role in moving Illinois toward reduced dependence on imported energy.

Elements of Our Plan

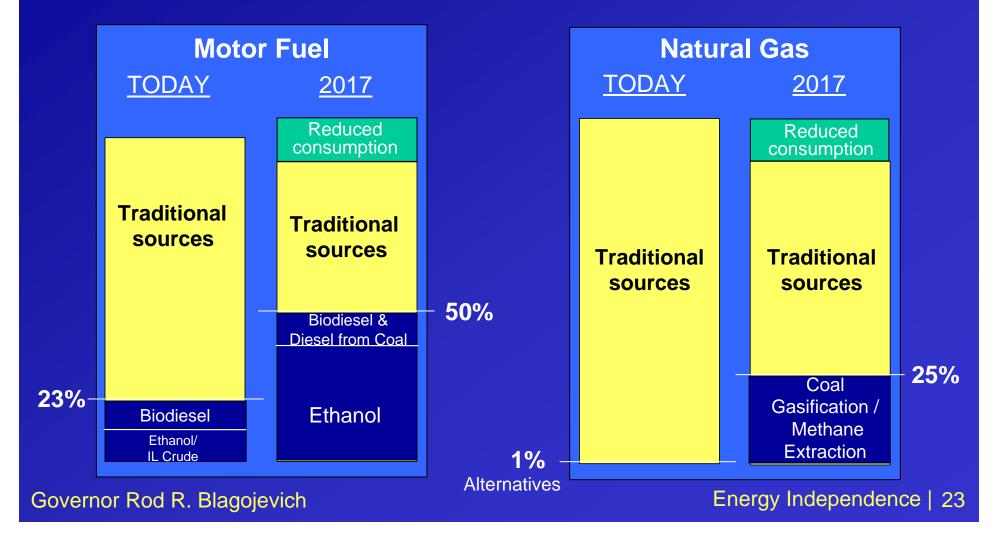
- Invest in renewable biofuels like ethanol and biodiesel
- more usable
- electricity made from Illinois coal
- more oil and gas
- efficiency and reduce consumption

Projected Benefits

- → 50% of our motor fuel needs will be met by Illinois crops by 2017
- 2. Make biofuels more available and ——— 100% of gas stations will provide E-85 biofuels by 2017 (up from 2% today)
- 3. Invest in natural gas, diesel fuel and ——— 25% of our natural gas will come from Illinois coal by 2017
- 4. Use recaptured CO2 to extract —— Double Illinois' oil production and boost natural gas production
- 5. Invest in renewable power / energy ——— Generate cleaner electricity and reduce heating and electricity costs for homes and businesses

Energy Benefits

By 2017, 50% of our motor fuel and 25% of our natural gas in Illinois can come from alternative sources.





Economic Benefits

- Illinois' economy will benefit from this plan through more stable energy prices, more jobs, and billions of dollars in new business investment.
- Economic models indicate that our investment will directly and indirectly generate more than 10,000 new permanent jobs, at least 20,000 construction jobs and over \$12 billion in private investment.
- Using more of our natural resources for energy production and reducing our energy consumption will strengthen our economy by keeping more of the dollars we spend on energy here in Illinois.

New Jobs from the Energy Plan

By implementing this new energy plan we can create over 30,000 jobs: nearly 20,000 construction jobs and 10,900 direct and indirect permanent jobs through 2017.

<u>Initiative</u>	Construction <u>Jobs</u>	Permanent <u>Jobs</u>
Biofuels*	8,000	7,000
Coal Gasification**	10,000	3,500
Renewable Power**	1,700	400
Tota	19,700	10,900

^{*} Includes both direct job estimates based on experience with existing and planned biofuels projects plus estimates of indirect jobs using models that predict broader economic impact of biofuels investment.

^{**} Job estimates based on experience with existing and planned gasification and renewable energy projects.



Step 1: Invest in Biofuels

Ethanol & Biodiesel



What Are "Biofuels"?

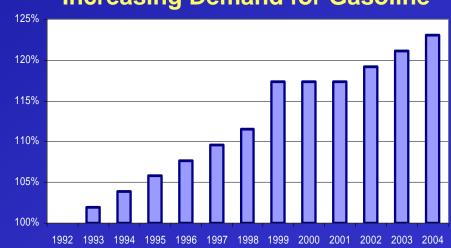
- Biofuels are cleaner burning, homegrown, renewable fuels produced from plants, like ethanol made from corn and biodiesel made from soybeans.
- Unlike fossil fuels, which are exhausted over time, biofuels are a homegrown renewable energy source that is replenished with each year's new crops.
- Almost all Illinois gasoline already contains 10% ethanol as a fuel additive to help reduce air pollution.
- Auto manufacturers can easily and cheaply produce new vehicles to run on biofuel based E-85.



Biofuels Can Replace Imported Oil

Growing demand for oil is driving up gasoline prices, from an average in the Midwest of \$1.10 per gallon in 1992 to over \$3.00 today. **Increasing Demand for Gasoline**

To make matters worse, Americans are using 23% more gasoline than we did in the early 1990's.



Increasing production of biofuels in Illinois will boost fuel supplies and help stabilize prices.



Invest in New Ethanol Plants

- Over the next four years, we propose investing \$100 million to support construction of up to 20 new ethanol plants, using about \$5 million in state grants for each plant. We have already attracted several new ethanol plants to Illinois since 2003 with similar grants.
- These new ethanol plants would boost Illinois' annual ethanol production by 200% to 2.5 billion gallons per year, equivalent to 50% of our gasoline needs by 2017.
- With this additional ethanol production, Illinois can generate another \$1.7 billion in business investment (investors pay for more than 90% of construction costs).





Invest in New Biodiesel Plants

- Biodiesel is a cleaner burning, homegrown, renewable fuel made from natural oils like soybean oil.
- Biodiesel is used today across Illinois in trucks, buses, farm equipment and other vehicles that run on diesel fuel.
- Over the next four years, we propose investing \$25 million to support the construction of up to 5 new biodiesel plants with state grants. We have already attracted new biodiesel plants to Illinois since 2003 using similar grants.
- These new plants would boost Illinois' annual biodiesel production by 200% to 400 million gallons per year, equivalent to 25% of our annual diesel fuel needs by 2017.
- With this additional biodiesel production Illinois will generate another \$225 million in business investment, as investors pay 90% of construction costs.



Promote Next Generation Biofuels

We propose investing another \$100 million to support construction of production facilities that can make ethanol from materials like corn husks, wood pulp and switchgrass.



- This new technology would make a fuel called "cellulosic ethanol," and could double the amount of ethanol we produce in Illinois using mainly plant material that would otherwise go to waste. Research on cellulosic ethanol is already under way at the National Corn to Ethanol Research Center at Southern Illinois University in Edwardsville.
- Economic models indicate that constructing 4 cellulosic ethanol plants could stimulate \$1.2 billion in private investment.



Support The Biofuels Industry

- Besides building new plants, we propose providing other critical support to Illinois' biofuels industry:
 - We will create the Biofuels Investment and Infrastructure Taskforce to drive continued investment in Illinois' biofuels industry and help make cellulosic ethanol commercially viable.
 - We will issue an executive order to speed construction of biofuels plants by expediting state permits and streamlining the permitting process.
 - We will support further research and development by increasing state support for the National Corn to Ethanol Research Center.
 - We will propose co-firing biofuels by-products with coal in gasification and power facilities to reduce emissions and increase efficiency.
 - We will eliminate the sunset on tax incentives for ethanol and biodiesel.
 - We will upgrade our rail infrastructure to support transportation of biofuels.



Biofuels Create Jobs

 Our investment in Biofuels will create more than 800 direct permanent jobs at these facilities as well as 8,000 construction jobs.

 We estimate that the creation of these jobs will generate new Illinois farming jobs and an additional 6,200 indirect permanent jobs in total.

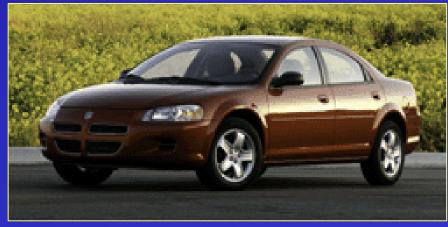


Part 2: Increase Use of Biofuels



Increase Access to Biofuels

- As we produce more biofuels, we need to make sure Illinois drivers can find it and use it.
- Auto manufacturers have recently pledged to boost "flex fuel" vehicle production. We will work with Illinois' automakers to make more "flex fuel" vehicles available to consumers.
- More Illinois gas stations must sell E-85 than the 2% that currently do.



Flexible Fuel Dodge Stratus



Provide Biofuels Incentives

- We will invest \$30 million to add 900 more E-85 pumps statewide by 2010, so 20% of Illinois gas stations will offer E-85 – and make E-85 available at all Illinois gas stations by 2017.
- We will provide automakers in Illinois with up to \$25 million to help them offer more flex fuel vehicles to Illinois drivers, improve the gas mileage of these vehicles, and create the first generation of flex fuel hybrid vehicles.
- We will increase public awareness about E-85 and promote E-85 use by local governments and private fleets.
- We will also require gas stations to notify customers if gasoline prices are expected to rise the next day by 5 cents or more.



Part 3: Invest in Advanced Coal Technology



Illinois Coal's Great Potential

- Coal is found under 37,000 square miles of Illinois – Illinois' coal reserves contain more energy than the oil reserves of Saudi Arabia and Kuwait.
- Illinois has 38 billion tons of recoverable coal reserves, which is 12% of all the coal in the United States.



What is Coal Gasification?

- Illinois' vast coal reserves can be transformed into transportation and home heating fuels using coal gasification technology.
- Instead of burning coal to release its energy, coal gasification plants convert coal from a solid to a gas that can be processed into a substitute for natural gas, diesel fuel or electricity.
- Gasification is the cleanest and most efficient way to convert coal to energy with low emissions of mercury and other air pollutants, while allowing carbon dioxide to be captured for underground storage.
- Two coal gasification plants are operating now in the U.S. and several coal gasification projects in Illinois are quickly progressing.



FutureGen: The Promise of Coal Gasification

- Among all states, Illinois is best suited for large scale development of coal gasification due to its vast coal reserves and its geology for carbon dioxide storage.
- Because of these advantages, two Illinois sites were chosen among the final four selected as national finalists for the FutureGen project, a federal public/private partnership to build the nation's first zero emissions coal fired power plant. The state's sites are located at Tuscola and Mattoon.
- If we win the FutureGen project, businesses and the federal government will invest \$1 billion in Illinois and create 150 permanent jobs and 1,300 construction jobs. If we do not win, we will have several ideal sites to develop gasification plants in the future.



Invest in Coal Gasification

- We will provide the nation's strongest package of financial and tax incentives to develop coal gasification plants.
- We will provide more than \$750 million in state incentives to stimulate construction of up to 10 coal gasification plants.
- These plants could meet 25% of Illinois' diesel fuel needs, 25% of our natural gas and 10% of our electricity needs by 2017.





Invest in Coal Gasification

- Investing more than \$750 million to help construct up to 10 new coal gasification plants would generate more than \$10 billion in new business investment in Illinois (these facilities average more than \$1 billion each to construct).
- Partnering with utility companies to purchase electricity and natural gas from coal gasification plants under long-term contracts will help stabilize natural gas and electricity prices for consumers.
- We will encourage large corporate and government fleets to buy diesel fuel produced by coal gasification plants.



Coal Gasification Creates Jobs

- Ten coal gasification plants would use enough coal to nearly double the amount of coal mined in Illinois.
- These plants would create about 1,000 new permanent jobs at the plant, 2,500 new coal mining jobs, and 10,000 construction jobs throughout Central and Southern Illinois.
- Winning the FutureGen project would create an additional 150 permanent jobs in Illinois.





Part 4: Reduce Air Pollution & Recover More Oil and Gas



Reduce Air Pollution

- Ethanol and biodiesel burn cleaner than gasoline or diesel made from oil.
- Fueling new ethanol and biodiesel plants with natural gas produced by coal gasification plants will reduce air pollution from biofuels facilities.
- Plant materials and by-products known as biomass can be used along with coal to co-fire power plants and coal gasification plants to reduce emissions.



Capture & Store Greenhouse Gases

- Traditional power plants create environmental problems by producing significant amounts of carbon dioxide (CO2), the source of 84% of emitted greenhouse gases.
- New coal gasification technology allows us to capture CO2 rather than releasing it into the atmosphere.
- Captured CO2 can be transported by pipeline to locations where it can be safely stored underground, preventing this greenhouse gas from escaping into the atmosphere.

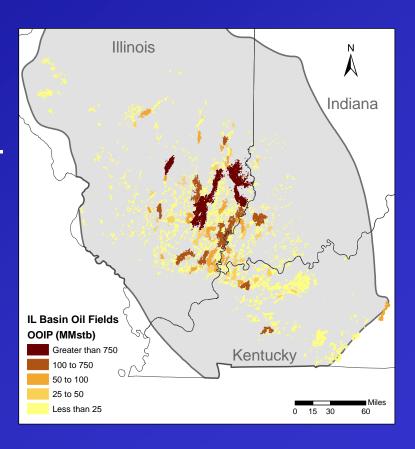
Conceptual CO2 Pipeline Route From Coal Gasification Plants to Illinois Oil Fields





Our Untapped Oil Supply

- Illinois' oil reserves hold about 1 billion barrels. Because Illinois oil fields are mature, we cannot increase production without using costly recovery techniques.
- Enhanced Oil Recovery, which uses CO2 to extract more oil from existing reserves, could double the amount of petroleum produced by Illinois annually, using CO2 that would otherwise cause global warming. The CO2 used to extract the oil stays safely trapped underground.





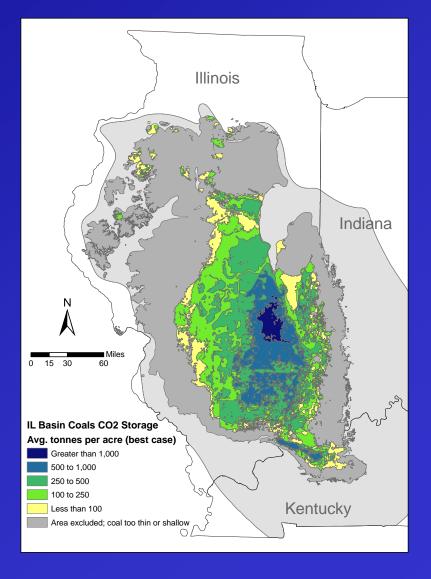
The Illinois CO2 Pipeline

- We will work with coal gasification facilities, pipeline operators and oil producers to construct a pipeline to transport CO2 produced at gasification facilities for storage underground.
- Some of this CO2 will be used by oil producers to perform Enhanced Oil Recovery (EOR) on Illinois oil fields, increasing the amount of oil we can produce.
- Because petroleum producers will pay for the CO2 necessary to extract more oil, we will partner with a private operator to maintain a 100 mile pipeline from gasification facilities to oil fields in southeastern Illinois at no annual cost to the State, using any excess proceeds to subsidize the sequestration of excess CO2.
- A similar pipeline operated to provide CO2 to oil producers for EOR is currently being profitably operated in Texas and New Mexico by a private pipeline operator.
- A 100 mile pipeline from central Illinois to the oil fields of southeastern Illinois would cost \$100 million to build, but is estimated to generate more than \$12 million annually in revenue.



Our Untapped Natural Gas Supply

- Illinois' coal reserves hold enough methane (a gas very similar to natural gas) to meet all of our natural gas needs for seven years.
- We will also extract methane by pumping CO2 transported by the pipeline to force out methane and permanently store CO2.





Part 5: Reduce Energy Use, Improve Efficiency, Invest in Renewable Energy



Reducing Vehicle Emissions & **Conserving Fuel**

- Another major cause of greenhouse gas emissions comes from the gasoline in our cars. Consuming more fuel, whether due to long commutes or inefficient cars, hurts the environment and costs drivers more money.
- To improve air quality, reduce global warming and make Illinois more energy efficient, we will aim to reduce pollution from vehicles and reduce motor fuel consumption in Illinois by 10% by 2017, a goal which could allow Illinois residents to save billions every year in fuel costs.
- We will work with the automobile industry, environmental groups and consumer advocates to form the Illinois Fuel Conservation Task Force, which will explore strategies to reduce fuel use by 10% in 2017.



Promoting Driving Alternatives

Ways to reduce fuel consumption that the Task Force will consider will include:

- Increasing investment in public transportation through the proposed capital budget, and improve coordination among transit agencies to achieve better service.
- Providing incentives to promote carpooling and car sharing and encourage biking and walking by incorporating bike and pedestrian lanes into IDOT road projects.
- Promoting efforts to reduce suburban sprawl by encouraging new development near public transit stations.







Improve Energy Efficiency

- Conserving energy by improving the energy efficiency of Illinois' homes, businesses and public buildings is the most cost-effective way to reduce energy use and lower utility bills.
- Adopting an Energy Efficiency Portfolio Standard to greatly increase investments in energy saving programs and technologies will reduce energy use, cut utility bills and improve reliability of the energy grid.
- Public buildings are a major user of energy in Illinois. We will create a \$25 million revolving loan fund to support energy efficiency investments in public buildings to reduce government energy usage.
- Illinois businesses use nearly half of all energy consumed in Illinois. We will create a \$25 million revolving loan fund to support energy efficiency investments by small businesses and manufacturers.
- We have already adopted a commercial building code to ensure that new commercial and multi-family residential buildings are energy efficient. We propose adopting a similar code to ensure that new single family homes also meet modern energy efficiency standards. 42 other states have already adopted such building codes.



Invest in Renewable Electricity

- Today Illinois generates 50% of our electricity from nuclear power, 46% from coal, 2% from natural gas and less than 2% from renewable sources like wind.
- Adopting a Renewable Portfolio Standard will greatly boost use of renewable electricity in Illinois. By 2015, we can generate 10% of our electricity from clean, renewable energy sources like wind power.



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Conclusion

- Unless we act now as a state to solve our energy crisis, prices will continue to rise and too many dollars will continue to flow out of Illinois if we remain dependent on imported energy.
- With the right planning, vision and leadership, we can make Illinois less reliant on foreign oil and gas by meeting a large portion of our fuel needs here at home.
- By reducing energy consumption in our homes, businesses, public buildings, and vehicles, we can protect the environment and save consumers money.
- We can't wait for the federal government. We can harness Illinois' vast natural resources to stabilize energy prices and give customers a real alternative if we are willing to act.



Paying for the Plan



What the Plan will Cost

The Energy Plan includes new programs, self-funded programs and programs funded with existing operations.

New programs include:

		New	
New Programs		<u>Spending</u>	Annual Cost
Coal Gasification (Startup costs)		\$175 million	\$16 million
Biodiesel		\$25 million	\$2 million
Automakers' Incentives		\$25 million	\$2 million
E-85 Station Conversions		\$30 million	\$2 million
Energy Efficiency Revolving Funds		\$50 million	<u>\$5 million</u>
	Total	\$305 million	\$27 million



What the Plan will Cost

The Energy Plan includes new programs, self-funded programs and programs funded with existing operations.

Existing and self-funded programs include:

Existing/Self-Funded Programs	Total <u>Spending</u>	Annual Cost
Coal Gasification	\$600 million	Self-Funded (by coal sales tax revenues)
CO2 Pipeline	\$100 million	Self-Funded (by CO2 pipeline transport fees)
Ethanol Plant Grants	\$100 million	Existing Budget
Cellulosic Ethanol	\$100 million	Existing Budget
Ethanol Research/Permitting	<u>\$5 million</u>	Existing Budget
To	tal \$905 million	



Funding the Plan through Enhanced Tax Revenues

- Every year, some taxes owed to the state are never collected. The Department of Revenue estimates that businesses owe up to \$40 million in sales and corporate income taxes to the State. Some businesses collect sales taxes from customers but don't remit that revenue to the State. Others, mainly out of state corporations, illegally shelter income that goes uncollected.
- The Department of Revenue is hiring 150 more tax auditors to collect these delinquent taxes, producing more than \$30 million in Fiscal Year 2007, and as much as \$40 million in Fiscal Year 2008.
- This revenue will be used to cover the debt service and operating costs associated with the Governor's energy plan.
- These new revenues will help ensure tax fairness and be collected without raising income or sales taxes or changing Illinois' tax code.



First Steps to Achieving Our Goals

- Hold a Governor's Energy Summit with state and elected officials and leaders from the agricultural, coal, biofuels, utilities, renewable energy, auto, and financial industries to launch our plan.
- Form the Illinois Clean Car and Energy Conservation Task Force to identify methods to reduce vehicle emissions and fuel use by 10% in 2017 as well as identify other energy-saving strategies.
- Create the Biofuels Investment & Infrastructure Taskforce.
- Issue an Executive Order to expedite state grants and permits for proposed biofuels and gasification plants.
- Work with legislative leaders and the General Assembly to secure strong state support for biofuels, coal gasification and for adoption of renewable energy and energy efficiency portfolio standards.